Technical Data Sheet

ALCHEMIX® PU 3664

Two Part, UV Stable, Water-Clear, Flexible Polyurethane System
50 Shore A Hardness

ALCHEMIX PU 3664 is a two component, water-clear, UV stable, flexible, polyurethane system. This ultra low viscosity, self-degassing system is ideal for potting, rapid prototyping, embedding or any type of casting application that needs optical clarity without vacuum. If required, ALCHEMIX PU 3664 can be pigmented in various colours using suitable PU pigments.

Mix Ratio

	PU 3664A :	PU 3664B
By Weight	100 :	100

Product Data

Property	Units	PU 3664A	PU 3664B	Mix
Material	-	Polyol	Isocyanate	Polyurethane
Appearance	-	Clear liquid	Clear liquid	Clear liquid / cured material
Viscosity (25°C)	mPa.s	150 – 250	20 – 40	80 – 100
Density (25°C)	g/cm^3	1.00 – 1.05	1.00 – 1.05	1.00 – 1.05
Pot life (200g, 25°C)	Minutes	-	-	≥ 120
Gel Time (200g, 45°C)	Minutes	-	-	25 – 35
Full Cure (200g, 25°C)	Hours	-	-	18 – 24
Minimum Recommended Casting Thickness	mm	-	-	3

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Cured Properties

Properties	Standard	Units	Result (Full Cure)
Hardness	BS 2782: Part 3: Method 365B	Shore A	45 – 55

Method of use

Ensure that the mould or potting vessel is clean and dry. When demould is required after curing, use a release agent such as RELEASE AGENT R6. Always ensure that the master model from which the mould is made has the exact finish that is required on the cast units, i.e. for optimum clarity, polish the master model to a very high sheen. When embedding an object, make sure the object is thoroughly dry.

Thoroughly mix the two components in the correct ratio. The material may become cloudy at the beginning, continue mixing until the liquid becomes clear. Mix the material from the wall and bottom of the container. Pour the material into the mould, onto the sides, in order to reduce air bubbles. When pouring is complete, leave the casting at room temperature for self-degassing. When all the bubbles have escaped, move the casting to oven/warm room at 50℃ for curing.

Storage

ALCHEMIX PU 3664A and B should be stored in original, unopened containers between 20 and 25℃. ALCHEMIX PU 3664B may crystallise partially or completely if not stored at above 20℃. Like all polyurethanes, both components are moisture sensitive. Moisture absorption will cause excessive aeration in cast parts. KEEP THE PACKING TIGHTLY SEALED WHEN NOT IN USE.

If stored under the above conditions, ALCHEMIX PU 3664A and B will have a shelf life of 6 months, from the date of production. Once the container is opened the unused resin (part A or B) must be kept under dry nitrogen.

Packaging

PU 3664A is supplied in 1 kg/ 5 kg and 10 kg containers.
PU 3664B is supplied in 1 kg/ 5 kg and 10 kg containers.

(Please contact Alchemie Ltd for bulk supply)

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Further Information

All data listed relates to typical values. This data should not be considered a product specification.

Our technical advice, whether verbal, or in writing is given in good faith, but without warranty – this also applies where proprietary rights of third parties are involved. It does not release you from the obligation to test the products supplied by us as to their suitability for the intended process and use.

Before using any of our products, users should familiarise themselves with the relevant Technical and MSDS provided by Alchemie Ltd.

Alchemie Limited

Alchemie Ltd develops, formulate and distribute Epoxy Resins, Polyurethane Resins, Silicones, Model Boards and Sheet Wax for use in the following applications:

- Electrical encapsulation
- Rapid Prototyping
- Prototypes
- Casting
- Gel Coating
- Laminating
- Model Making
- Master Models
- Flexible and rigid mould making

We offer fast service, technical support, development expertise, innovative products, diverse knowledge and experience.

We are a well-established company, with a high level of investment and experience. We implement BS EN ISO 9001.

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